

CLAIMS

1. A semiconductor memory device comprising:
a housing having a connecting section for connection to a host device;
a plurality of compact-size semiconductor memory cards housed in the housing; and

a control means for controlling transmission / reception of a signal between the connecting section and the plurality of compact-size semiconductor memory cards.

2. A semiconductor memory device as claimed in Claim 1, wherein the housing is formed in a substantially rectangular shape in plan view, and both end sections of the housing having a predetermined width in a shorter-edge direction thereof are made thinner than an intermediate section of the housing in the same direction,

the plurality of compact-size semiconductor memory cards is flatly housed in the housing, and

at least the two compact-size semiconductor memory cards are adjacently disposed in the shorter-edge direction.

3. A semiconductor memory device as claimed in Claim 2, wherein the four compact-size semiconductor memory cards are housed in the housing, and

the two compact-size semiconductor memory cards are also adjacently disposed in a longitudinal direction of the housing.

4. Semiconductor memory device as claimed in Claim 2 or 3,
wherein

the intermediate section comprises a first expanding part and a second expanding part respectively expanding from the both end sections in one direction and another direction in a thickness direction of the housing,

the compact-size semiconductor memory cards are housed on the first expanding part side in such manner that a part thereof falls on the both end sections made thinner than the intermediate section, and

the control means is disposed on the second expanding part side.

5. A semiconductor memory device as claimed in any of Claims 1 through 4, further comprising,

a circuit substrate provided with a retaining section for retaining the compact-size semiconductor memory cards on one surface thereof, and

the control means is disposed on another surface side of the circuit substrate.

6. A semiconductor memory device as claimed in Claim 5, wherein both edge sections of the circuit substrate in one direction thereof are supported by the both end sections of the housing in the shorter-edge direction.

7. A semiconductor memory device as claimed in any of Claims 1 through 6, wherein the housing has a card shape in which a nominal dimension of a thickest part thereof is at most 5.0 mm.

8. A semiconductor memory device as claimed in any of Claims 1 through 7, wherein the housing has a size in which a width nominal dimension is 54.0 mm and a length nominal dimension is 85.6 mm conforming to PC Card Standards.

9. A semiconductor memory device as claimed in Claim 8, wherein the housing has a size conforming to Type II of PC Card Standards by PCMCIA in which a width nominal dimension is set to 54.0 mm, a length nominal dimension is set to 85.6 mm, and a nominal dimension of a thickest part is set to 5.0 mm.

10. A semiconductor memory device as claimed in any of Claims 1 through 9, wherein the compact-size semiconductor memory cards has a size conforming to SD Memory Card (R: Registered trade mark) Standards by SD Association in which a width nominal dimension is 24.0 mm, a length nominal dimension is 32.0 mm, and a nominal dimension of a thickest part is 2.1 mm.

11. A semiconductor memory device as claimed Claim 10, wherein the housing comprises:
the circuit substrate;
the plurality of compact-size semiconductor memory cards flatly disposed on an upper surface of the circuit substrate in such manner that a terminal section is directed upward and conforming to the SD Memory Card (R: Registered trade mark) Standards; and

the control means disposed on a lower surface of the circuit substrate.

12. A semiconductor memory device as claimed Claim 10, wherein the housing comprises:
the circuit substrate;
the plurality of compact-size semiconductor memory cards flatly disposed on a lower surface of the circuit substrate in such manner that a terminal section is directed downward and conforming to the SD Memory Card (R: Registered trade mark) Standards; and

the control means disposed on an upper surface of the circuit substrate.

13. A semiconductor memory device as claimed in any of Claims 1 through 12, wherein

the housing is provided with a restricting mechanism for restricting removal of the compact-size semiconductor memory cards out of the housing.

14. A semiconductor memory device as claimed in any of Claims 1 through 13, wherein

the housing comprises a switch means whose operation state is operable from outside of the housing,

a monitor means for monitoring the operation state of the switch means is provided, and

a write operation with respect to the compact-size semiconductor

memory cards is prohibited when the monitor means detects that the switch means is set on a write prohibition side.